

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A fluid dispenser cartridge suitable for installation into an apparatus for dispensing predetermined volumes of fluid, the fluid dispenser cartridge comprising:

a fluid reservoir having a fluid inlet and a fluid outlet, the fluid inlet suitable for introducing fluid into the fluid reservoir, the fluid outlet suitable for releasing fluid from the fluid reservoir;

a fill tube assembly connected to said fluid reservoir at said fluid outlet such that fluid from said fluid reservoir can flow into said fill tube assembly during use of said cartridge in said apparatus, the fill tube assembly having a discharge port for dispensing fluid out of said fill tube assembly; and

means for gating gas into or out of either said fluid reservoir or said fill tube assembly to substantially equalize pressure ~~inside and outside~~ to that of the ambient environment ~~said fluid dispenser cartridge~~ during use of said cartridge in said apparatus; said gas gating means being disposed in either said fluid reservoir or said fill tube assembly or both; and

a fill valve operatively engaged onto the fill tube assembly wherein the fill valve is in direct fluid communication with the reservoir and is capable of controlling fluid flow from the reservoir into the fill tube.

2. (Original) The fluid dispenser cartridge of claim 1, wherein said gas gating means comprises a substantially gas permeable material forming a portion of said fluid reservoir.

3. (Original) The fluid dispenser cartridge of claim 2, wherein said substantially gas permeable material is a sheet of polyethylene fiber.

4. (Original) The fluid dispenser cartridge of claim 2, wherein said substantially gas permeable material is a polytetrafluoroethylene membrane.

5. (Currently amended) A fluid dispenser cartridge suitable for installation into an apparatus for dispensing predetermined volumes of fluid, the fluid dispenser cartridge comprising:

a substantially rigid fluid reservoir having a fluid inlet and a fluid outlet, the fluid inlet suitable for introducing fluid into the substantially rigid fluid reservoir, the fluid outlet suitable for releasing fluid from the substantially rigid fluid reservoir;

a fill tube assembly connected to said substantially rigid fluid reservoir at said fluid outlet such that fluid from said substantially rigid fluid reservoir can flow into said fill tube assembly, the fill tube assembly having a discharge port for dispensing fluid out of said fill tube assembly; and

means for gating gas into or out of either said substantially rigid fluid reservoir or said fill tube assembly to substantially equalize pressure ~~inside and outside~~ to that of the ambient environment ~~said fluid dispenser cartridge~~ during use of said cartridge in said apparatus; said gas gating means being disposed in either said substantially rigid fluid reservoir or said fill tube assembly or both; and

5 a fill valve operatively engaged onto the fill tube assembly wherein the fill valve is in direct fluid communication with the reservoir and is capable of controlling fluid flow from the reservoir into the fill tube.

6. (Original) The fluid dispenser cartridge of claim 5, wherein said gas gating means comprises a vent filter.

7. (Original) The fluid dispenser cartridge of claim 5, wherein said gas gating means comprises a pressure release valve.

8. (Original) The fluid dispenser cartridge of claim 5, wherein said gas gating means comprises a substantially gas permeable material forming a portion of said substantially rigid fluid reservoir.
9. (Original) The fluid dispenser cartridge of claim 8, wherein said substantially gas permeable material is a sheet of polyethylene fiber.
10. (Original) The fluid dispenser cartridge of claim 8, wherein said substantially gas permeable material is a polytetrafluoroethylene membrane.
11. (Previously presented) The fluid dispenser cartridge of claim 1, wherein the fill tube is a closed loop.
12. (Previously presented) The fluid dispenser cartridge of claim 1, wherein the fill tube is a non-closed loop.
13. (Previously presented) The fluid dispenser cartridge of claim 1, wherein the fill valve is controlled by a solenoid.
14. (Previously presented) The fluid dispenser cartridge of claim 1, further comprising an optical sensor.
15. (Previously presented) The fluid dispenser cartridge of claim 5, wherein the fill tube is a closed loop.
16. (Previously presented) The fluid dispenser cartridge of claim 5, wherein the fill tube is a non-closed loop.
17. (Previously presented) The fluid dispenser cartridge of claim 5, wherein the fill valve is controlled by a solenoid.

18. (Previously presented) The fluid dispenser cartridge of claim 5, further comprising an optical sensor.

19. (Previously presented) The fluid dispenser cartridge of claim 5, wherein the reservoir is made of a material chosen from include polyethylene terephthalate, high density polyethylene, polyvinyl chloride, polypropylene, polystyrene, metal and glass.

20. (New) A fluid dispenser cartridge suitable for installation into an apparatus for dispensing predetermined volumes of fluid, the fluid dispenser cartridge comprising:

a fluid reservoir having a fluid inlet and a fluid outlet, the fluid inlet suitable for introducing fluid into the fluid reservoir, the fluid outlet suitable for releasing fluid from the fluid reservoir;

a fill tube assembly connected to said fluid reservoir at said fluid outlet such that fluid from said fluid reservoir can flow into said fill tube assembly during use of said cartridge in said apparatus, the fill tube assembly having a discharge port for dispensing fluid out of said fill tube assembly; and

a gas gate chosen from a vent filter assemblage and a pressure activated valve said gas gate being disposed in either said fluid reservoir or said fill tube assembly or both; and

a fill valve operatively engaged onto the fill tube assembly wherein the fill valve is in direct fluid communication with the reservoir and is capable of controlling fluid flow from the reservoir into the fill tube.